Air Quality Assessment For The

WILSON RESERVOIR

CITY OF SOUTH PASADENA

Prepared For:

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1.1 Project Description

The proposed Wilson Reservoir project would replace the existing water storage facility with a new and improved facility. The new facility would provide approximately 30% more capacity, and would consist of a new 1,200 square foot booster pump station including chlorination facility, an operation building, metering facility, and clearwell.

The proposed project includes demolition of the existing pump station and concrete foundation and construction of a new pump station and related operation building. The bulk of construction time would involve demolition and excavation of the existing facility, some 24-hour concrete pour of the new foundation, and construction of the new pump station and operation building.

The Wilson Reservoir is located at 545 Adelyn Street in City of San Gabriel. The existing reservoir is owned and operated by the City of South Pasadena. The City of South Pasadena is the lead agency for the project. The vicinity map is presented in Exhibit 1. The site plan is illustrated in Exhibit 2.

This report analyzes the potential air quality impacts associated with this project. Regional air quality impacts from construction of the proposed project are analyzed, as are potential local air quality impacts. No significant change in operational emissions would be generated.

1.2 Local, State, and Federal Air Quality Agencies

The proposed project is located in the South Coast Air Basin (SCAB). The SCAB is comprised of parts of Los Angeles, Riverside and San Bernardino counties and all of Orange County. The primary agencies responsible for regulations to improve air quality in the SCAB are the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). The Southern California Association of Governments (SCAG) is an important partner to the SCAQMD, as it is the designated metropolitan planning authority for the area and produces estimates of anticipated future growth and vehicular travel in the basin which are used for air quality planning. The SCAQMD sets and enforces regulations for non-vehicular sources of air pollution in the basin and works with SCAG to develop and implement Transportation Control Measures (TCM). TCM measures are intended to reduce and improve vehicular travel and associated pollutant emissions.

CARB was established in 1967 by the California Legislature to attain and maintain healthy air quality primarily caused by motor vehicles, which are the major causes of air pollution in the State. CARB sets and enforces emission standards for motor vehicles, fuels, and consumer products. It identifies and sets control measures for toxic air contaminants, health based California Ambient Air Quality Standards (CAAQS) and monitors air quality levels throughout the state. CARB provides assistance for local air quality districts, such as SCAQMD.

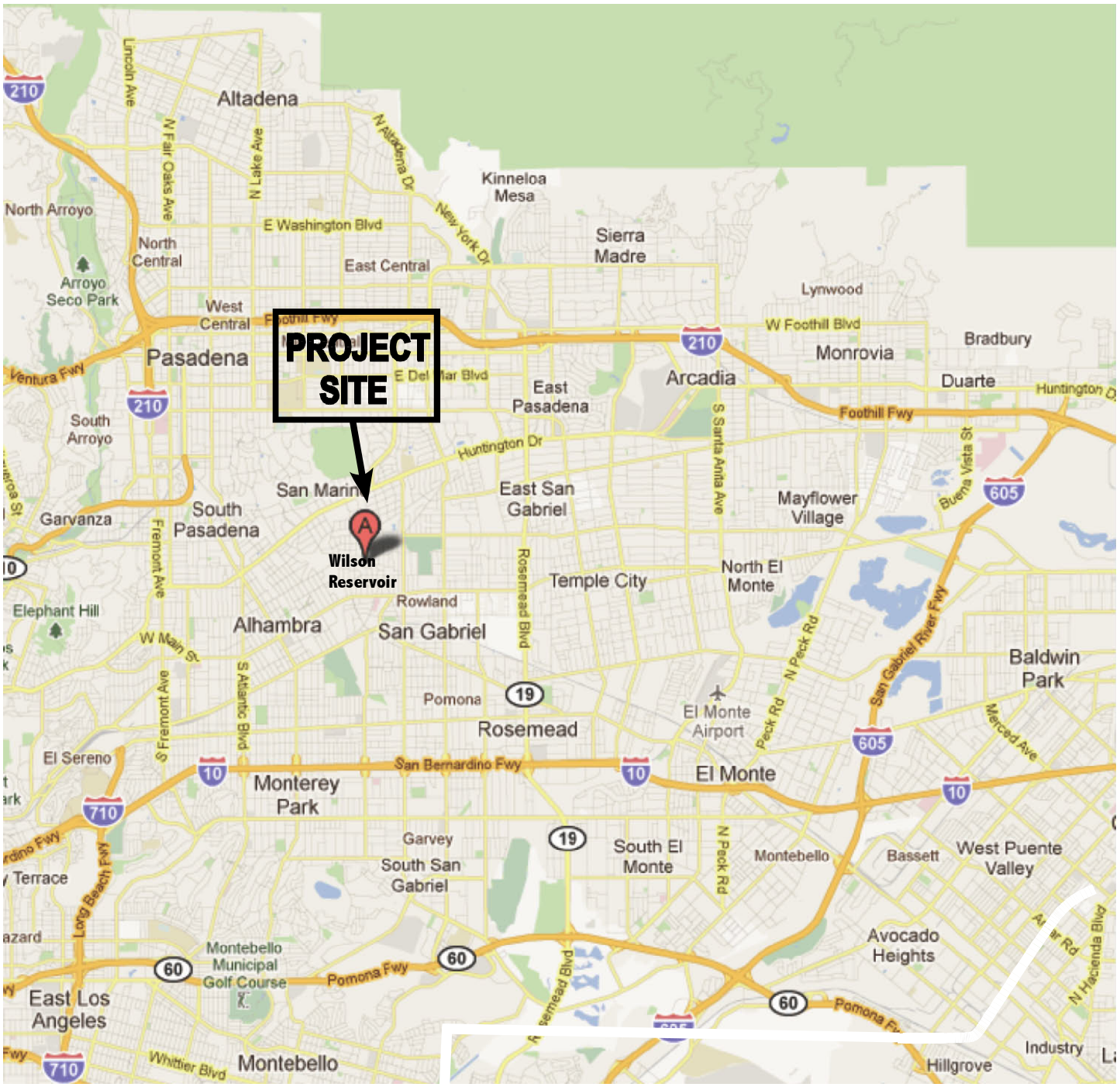

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Exhibit 1
Vicinity Map

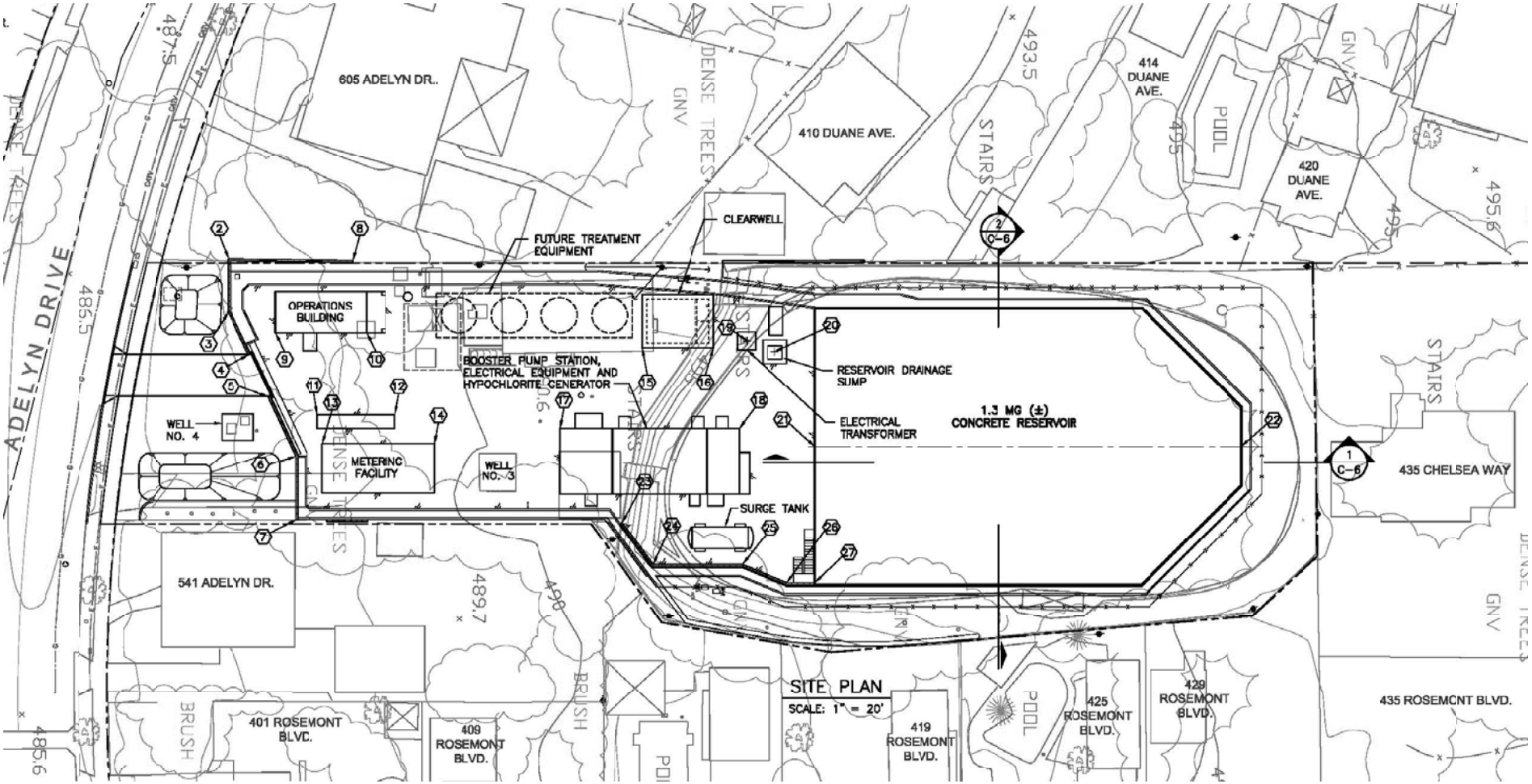

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Exhibit 2
Site Plan

The U.S. Environmental Protection Agency (U.S. EPA) is the primary federal agency for regulating air quality. The EPA implements the provisions of the Federal Clean Air Act (FCAA). This Act establishes national ambient air quality standards (NAAQS) that are applicable nationwide. The EPA designates areas with pollutant concentrations that do not meet the NAAQS as non-attainment areas for each criteria pollutant. States are required by the FCAA to prepare State Implementation Plans (SIP) for designated non-attainment areas. The SIP is required to demonstrate how the areas will attain the NAAQS by the prescribed deadlines and what measures will be required to attain the standards. Areas that achieve the NAAQS after a non-attainment designation are redesignated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the NAAQS.

The CCAA required all air pollution control districts in the state to prepare a plan prior to December 31, 1994 to reduce pollutant concentrations exceeding the CAAQS and ultimately achieve the CAAQS. The districts are required to review and revise these plans every three years. The SCAQMD satisfies this requirement through the publication of an Air Quality Management Plan (AQMP). The AQMP is developed by SCAQMD and SCAG in coordination with local governments and the private sector. The AQMP is incorporated into the SIP by CARB to satisfy the FCAA requirements discussed above. The AQMP is discussed further in Section 1.5.

1.3 Criteria Pollutants, Health Effects, and Standards

Under the Federal Clean Air Act (FCAA), the U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for six major pollutants; ozone (O_3), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. These six air pollutants are often referred to as the criteria pollutants.

Under the California Clean Air Act (CCAA), the California Air Resources Board has established California Ambient Air Quality Standards (CAAQS) to protect the health and welfare of Californians. State standards have been established for the six criteria pollutants as well as four additional pollutants; visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Table 1 presents the state and national ambient air quality standards. A brief explanation of each pollutant and their health effects is presented follows.

Table 1 Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards** [1]		**Federal Standards** [2]		
		Concentration [3]	**Method** [4]	**Primary** [3,5]	**Secondary** [3,6]	**Method** [7]
Ozone (O_3)	1 Hour	0.09 ppm (180 $\mu g/m^3$)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 $\mu g/m^3$)		0.075 ppm (147 $\mu g/m^3$)		
Respirable Particulate Matter (PM10)	24 Hour	50 $\mu g/m^3$	Gravimetric or Beta Attenuation	150 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 $\mu g/m^3$		–		
Fine Particulate Matter (PM2.5)	24 Hour	No Separate State Standard		35 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 $\mu g/m^3$	Gravimetric or Beta Attenuation	15.0 $\mu g/m^3$		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	–
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 $\mu g/m3$)	Gas Phase Chemiluminescence	53 ppb (100 $\mu g/m^3$) (see footnote 8)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 $\mu g/m^3$)		100 ppb (188 $\mu g/m^3$) (see footnote 8)	None	
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 $\mu g/m^3$)	Ultraviolet Fluorescence	–	–	Ultraviolet Flouresence; Spectrophotometry (Pararosaniline Method)[9]
	3 Hour	–		–	0.5 ppm (1300 $\mu g/m^3$) (see footnote 9)	
	1 Hour	0.25 ppm (655 $\mu g/m^3$)		75 ppb (196 $\mu g/m^3$) (see footnote 9)	–	
Lead[10]	30 Day Average	1.5 $\mu g/m^3$	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 $\mu g/m^3$	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average[11]	–		0.15 $\mu g/m^3$		
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates	24 Hour	25 $\mu g/m^3$	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu g/m^3$)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 $\mu g/m^3$)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.

8. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the EPA standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

9. On June 2, 2010, the U.S. EPA established a new 1-hour SO2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older pararosaniline methods until the new FRM have adequately permeated State monitoring networks. The EPA also revoked both the existing 24-hour SO2 standard of 0.14 ppm and the annual primary SO2 standard of 0.030 ppm, effective August 23, 2010.

The secondary SO2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA. Note that the new standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the new primary national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

11. National lead standard, rolling 3-month average: final rule signed October 15, 2008.

1.3.1 Ozone (O_3)

Ozone is a secondary pollutant; it is not directly emitted. Ozone is the result of chemical reactions between volatile organic compounds (VOC) (also referred to as reactive organic gasses (ROG)) and nitrogen oxides (NO_x), which occur only in the presence of bright sunlight. Sunlight and hot weather cause ground-level ozone to form in the air. As a result, it is known as a summertime air pollutant. Ground-level ozone is the primary constituent of smog. Because ozone is formed in the atmosphere, high concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when ozone levels are unhealthy. Numerous scientific studies have linked ground-level ozone exposure to a variety of problems, including lung irritation, breathing difficulties, permanent lung damage, aggravated asthma, and increased susceptibility to pneumonia and bronchitis.

Ground-level ozone can have detrimental effects on plants and ecosystems. These effects include interfering with the ability of sensitive plants to produce and store food, making them more susceptible, damaging the leaves of trees and other plants, and reducing crop yields and forest growth.

1.3.2 Particulate Matter (PM_{10} & $PM_{2.5}$)

Particulate matter includes both aerosols and solid particles of a wide range of size and composition. Of particular concern are those particles smaller than 10 microns in size (PM_{10}) and smaller than or equal to 2.5 microns ($PM_{2.5}$). The size of the particulate matter is referenced to the aerodynamic diameter of the particulate. Smaller particulates are of greater concern because they can penetrate deeper into the lungs than large particles.

The principal health effect of airborne particulate matter is on the respiratory system. Short-term exposures to high $PM_{2.5}$ levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposures to high $PM_{2.5}$ levels are associated with premature mortality and development of chronic respiratory disease. Short-term exposures to high PM10 levels are associated with hospital admissions for cardiopulmonary diseases, increased respiratory symptoms and possible premature mortality. According to a 2010 California Air Resources Board study, PM2.5 exposure leads to 9,200 premature deaths annually in CA.

$PM_{2.5}$ is directly emitted in combustion exhaust and formed from atmospheric reactions between of various gaseous pollutants including nitrogen oxides (NO_x) sulfur oxides (SO_x) and volatile organic compounds (VOC). PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or the re suspension of dusts most typically through construction activities and vehicular travels. $PM_{2.5}$ can remain suspended in the atmosphere for days and weeks and can be transported long distances. PM_{10} generally settles out of the atmosphere rapidly and are not readily transported over large distances.

1.3.3 Carbon Monoxide (CO)

Carbon monoxide is a colorless and odorless gas, which in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Carbon monoxide combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High carbon monoxide concentrations can lead to headaches, aggravation of cardiovascular disease, and impairment of central nervous system functions. Carbon monoxide concentrations can vary greatly over comparatively short distances. Relatively high concentrations are typically found near crowded intersections, along heavily used roadways carrying slow-moving traffic, and at or near ground level. Even under the most severe meteorological and traffic conditions, high concentrations of carbon monoxide are limited to locations within a relatively short distance (i.e., up to 600 feet or 185 meters) of heavily traveled roadways. Overall carbon monoxide emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

1.3.4 Nitrogen Dioxide (NO_2)

Nitrogen gas, normally relatively inert (unreactive), comprises about 80% of the air. Nitrogen dioxide is toxic to various animals as well as to humans. Its toxicity relates to its ability to form

nitric acid with water in the eye, lung, mucus membrane and skin. In animals, long-term exposure to nitrogen oxides increases susceptibility to respiratory infections lowering their resistance to such diseases as pneumonia and influenza. Laboratory studies show susceptible humans, such as asthmatics, exposed to high concentrations of NO_2 can suffer lung irritation and potentially, lung damage. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

1.3.5 Sulfur Dioxide (SO_2)

Sulfur oxides (SO_x) constitute a class of compounds of which sulfur dioxide (SO_2) and sulfur trioxide (SO_3) are of greatest importance. Combustion of fossil fuels for generation of electric power is the primary contributor of SO_x emissions. Industrial processes, such as nonferrous metal smelting, also contribute to SO_x emissions. SO_x is also formed during combustion of motor fuels. However, most of the sulfur has been removed from fuels greatly reducing SO_x emissions from vehicles.

SO_2 combines easily with water vapor, forming aerosols of sulfurous acid (H_2SO_3), a colorless, mildly corrosive liquid. Peak levels of SO_2 in the air can cause temporary breathing difficulty for people with asthma who are active outdoors. Longer-term exposures to high levels of SO_2gas and particles cause respiratory illness and aggravate existing heart disease. SO_2 reacts with other chemicals in the air to form tiny sulfate particles which are measured as $PM_{2.5}$. The health effects of $PM_{2.5}$ are discussed in Section 1.3.2.

1.3.6 Lead (Pb)

Lead is a stable compound, which persists and accumulates both in the environment and in animals. In humans, it affects the blood-forming or hematopoietic, the nervous, and the renal systems. In addition, lead has been shown to affect the normal functions of the reproductive, endocrine, hepatic, cardiovascular, immunological, and gastrointestinal systems, although there is significant individual variability in response to lead exposure. Since 1975, lead emissions have been in decline due in part to the introduction of catalyst-equipped vehicles, and decline in production of leaded gasoline. In general, an analysis of lead is limited to projects that emit significant quantities of the pollutant (i.e. lead smelters) and are not applied to transportation projects.

1.3.7 Visibility Reducing Particulates

Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. The Statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. A separate standard for visibility-reducing particles that is applicable only in the Lake Tahoe Air Basin is based on reduction in scenic quality.

1.3.8 Sulfates

Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur.

The ARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

1.3.9 Hydrogen Sulfide (H_2S)

Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. It can also be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard will result in exposure to a very disagreeable odor. In 1984, an ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

1.3.10 Vinyl Chloride (Chloroethene)

Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes in liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.

1.4 South Coast Air Basin Air Quality Attainment Designations

Based on monitored air pollutant concentrations, the U.S. EPA and CARB designate areas relative to their status in attaining the NAAQS and CAAQS respectively. Table 2 lists the current attainment designations for the SCAB. For the Federal standards, the required attainment date is also shown. The Unclassified designation indicates that the air quality data for the area does not support a designation of attainment or nonattainment.

Table 2 Designations of Criteria Pollutants for the SCAB

Pollutant	Federal	State
Ozone (O_3) 8-Hour Ozone	Severe-17 Nonattainment Extreme Nonattainment	Nonattainment
Respirable Particulate Matter (PM_{10})	Serious Nonattainment (2006)	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment (2015)	Nonattainment
Carbon Monoxide (CO)	Attainment/Maintenance (2000)	Attainment
Nitrogen Dioxide (NO_2)	Attainment/Maintenance (1995)	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment
Visibility Reducing Particles	n/a	Unclassified
Sulfates	n/a	Unclassified
Hydrogen Sulfide	n/a	Attainment
Vinyl Chloride	n/a	Attainment

Table 2 shows that the U.S. EPA has designated SCAB as Severe-17 non-attainment for ozone, serious non-attainment for PM_{10}, non-attainment for $PM_{2.5}$, and attainment/maintenance for CO and NO_2. Additionally, the basin has been designated by the state as non-attainment for ozone, PM_{10}, and $PM_{2.5}$. The basin is in attainment for federal SO_2 and lead NAAQS as well as the state CO, NO_2, SO_2, lead, hydrogen sulfide, and vinyl chloride CAAQS.

Attainment/non-attainment designations for the new 8-hour ozone standard were issued on April 15, 2004 and became effective, but the 1-hour ozone standard was revoked by the EPA around that same time. California has retained the 1-hour concentration standard of 0.09 ppm. The 8-hour ozone standard has been redesignated from severe-17 non-attainment to extreme with the attainment deadline of 2024. On March 12, 2008, U.S. EPA announced that it was lowering the 8-hour average NAAQS for ozone to 0.075 ppm. To be redesignated as attainment by the state, the basin will need to achieve both the 1-hour and 8-hour ozone standards.

As of 2006, the Basin had met the federal PM_{10} standards at all monitoring stations except the western Riverside where the annual PM_{10} standard had not been met. With this change, the basin is technically in attainment of the federal PM_{10} standards although the redesignation process has not yet begun. However, on September 21, 2006, the U.S. EPA announced that it was revoking the annual PM_{10} standard.

In July 1997, U.S. EPA issued NAAQS for fine particulate matter ($PM_{2.5}$). The $PM_{2.5}$ standards include an annual standard set at 15 micrograms per cubic meter ($\mu g/m^3$), and a 24-hour standard of 65 $\mu g/m^3$. In early 2005, EPA took final action to designate attainment and nonattainment areas under the NAAQS for $PM_{2.5}$ effective April 5, 2005. On September 21, 2006, the U.S. EPA announced that the 24-hour $PM_{2.5}$ standard was lowered to 35 $\mu g/m^3$. As of June 29, 2011, the U.S. EPA is proposing to approve California's air quality plans for fine particles - also known as PM2.5 - in the South Coast and San Joaquin Valley. These plans will reduce pollution to the level required by the health based 1997 PM2.5 standard by 2015.

Since 2002, the basin has been granted an extension to attain the standard and has not had any violations of the federal CO standards. The South Coast AQMD adopted a CO Redesignation Request and Maintenance Plan, with the U.S. EPA's approval in 2007. Effective June 11, 2007, the SCAB was re-designated as attainment/maintenance for the federal CO NAAQS. The plan provides for maintenance of the federal CO air quality standard until at least 2015 and commits to revising the Plan in 2013 to ensure maintenance through 2025.

The federal annual NO_2 standard was met for the first time in 1992 and has not been exceeded since. The SCAB was redesignated as attainment for NO_2 in 1998. On January 24, 2011, the ARB submitted area designation recommendations for the new federal 100 ppb 1 hour NO2 standard to EPA. They recommended that all of California be designated attainment or unclassified.

Table 2 shows that SCAB is designated as in attainment of the SO_2 and lead NAAQS as well as the state CO, NO_2, SO_2, lead, hydrogen sulfide, and vinyl chloride CAAQS. Generally, these pollutants are not considered a concern in the SCAB.

1.5 Air Quality Management Plan (AQMP)

As discussed above, the CAA requires plans to demonstrate attainment of the NAAQS for which an area is designated as nonattainment. Further, the CCAA requires SCAQMD to revise its plan to reduce pollutant concentrations exceeding the CAAQS every three years. The SCAB, SCAQMD and SCAG, in coordination with local governments and the private sector, develop the Air Quality Management Plan (AQMP) for the air basin to satisfy these requirements. The AQMP is the most important air management document for the basin because it provides the blueprint for meeting state and federal ambient air quality standards.

The 2007 AQMP was prepared in response to the implementation of the federal $PM_{2.5}$ and 8-hour ozone NAAQS. The implementation of the new standards required completion of plan addressing attainment of the 8-hour ozone standard by June of 2007 and completion of a plan addressing the $PM_{2.5}$ standard one year later, in April of 2008. SCAQMD determined that it was most prudent to prepare an integrated plan to address both pollutants. The attainment date for the $PM_{2.5}$ NAAQS is earlier (i.e., 2015) than the attainment date for the ozone NAAQS (i.e., 2021) and the district felt that delaying a plan for $PM_{2.5}$ by a year could jeopardize the basin's ability to attain the standard. Further, development of a plan for ozone would have likely focused on lowering VOC emissions, which would have no effect on $PM_{2.5}$ levels. Reductions in NO_x emissions result in reductions in both ozone and $PM_{2.5}$ levels.

The 2007 AQMP demonstrates attainment of the 65 $\mu g/m^3$ 24-hour average and 15$\mu g/m^3$ annual average $PM_{2.5}$ standard by the 2015 deadline. However, it should be noted that in September of

2006, the U.S. EPA lowered the 24-hour $PM_{2.5}$ NAAQS to 35 $\mu g/m^3$. An attainment plan for the revised standard will need to be completed by 2013. The deadline for meeting the revised standard will not change (i.e., April 2015) but five year extensions to attain the standard may be granted by the U.S. EPA.

It should be noted that on March 12, 2008, the U.S. EPA lowered the 8-hour ozone standard to 0.075 ppm. This effectively lowers the standard 0.009 ppm as 0.084 ppm is considered meeting the 0.08 ppm standard. A plan to attain the revised standard will need to be completed by 2013. Attainment deadlines for the revised standard have not been established and may vary depending on the severity of the exceedances.

1.6 Climate

The climate in and around the project area, as with all of Southern California, is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. It maintains moderate temperatures and comfortable humidity, and limits precipitation to a few storms during the winter "wet" season. Temperatures are normally mild, excepting the summer months, which commonly bring substantially higher temperatures. In all portions of the basin, temperatures well above 100 degrees F. have been recorded in recent years. The annual average temperature in the basin is approximately 62 degrees Fahrenheit.

Winds in the project area are usually driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime onshore sea breezes. At night, the wind generally slows and reverses direction traveling towards the sea. Wind direction will be altered by local canyons, with wind tending to flow parallel to the canyons. During the transition period from one wind pattern to the other, the dominant wind direction rotates into the south and causes a minor wind direction maximum from the south. The frequency of calm winds (less than 2 miles per hour) is less than 10 percent. Therefore, there is little stagnation in the project vicinity, especially during busy daytime traffic hours.

Southern California frequently has temperature inversions, which inhibit the dispersion of pollutants. Inversions may be either ground based or elevated. Ground based inversions, sometimes referred to as radiation inversions, are most severe during clear, cold, early winter mornings. Under conditions of a ground-based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur local to major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. Elevated inversions act as a lid or upper boundary and restrict vertical mixing. Below the elevated inversion, dispersion is not restricted. Mixing heights for elevated inversions are lower in the summer and more persistent. This low summer inversion puts a lid over the South Coast Air Basin (SCAB) and is responsible for the high levels of ozone observed during summer months in the air basin.

1.7 Monitored Air Quality

Air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates for the SCAB have been made for existing emissions ("2007 Air Quality Management Plan", June 2007). The data indicate that on-road (e.g.; automobiles, busses and trucks) and off-road (e.g.; trains, ships, and construction equipment) mobile sources are the major source of current emissions in the SCAB. Mobile sources account for approximately 64% of VOC

emissions, 92% of NOx emissions, 39% of direct PM2.5 emissions, 59% of SOx emissions and 98% of CO emissions. Area sources (e.g., architectural coatings, residential water heaters, and consumer products) account for approximately 30% of VOC emissions and 32% of direct $PM_{2.5}$ emissions. Point sources (e.g., chemical manufacturing, petroleum production, and electric utilities) account for approximately 38% of SOx emissions. Entrained road dust account for approximately 20% of direct $PM_{2.5}$ emissions

The SCAQMD has divided the SCAB into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project is in the South Pasadena area. The Pasadena monitoring station is the nearest station, located at 752 S. Wilson Avenue, approximately 2 miles northwest of the project site. The data collected at the Pasadena station is considered representative of the air quality experienced in the vicinity of the project. The air pollutants measured at the Pasadena station include ozone, carbon monoxide (CO), $PM_{2.5}$ and NO_2. The nearest station for PM_{10} is the Los Angeles – North Main Street station. The air quality data monitored from 2008 to 2010 are the most recent published by the Air Resources Board and are presented in Table 3. The monitoring data presented in Table 3 0were obtained from the CARB air quality data website (www.arb.ca.gov/adam/). Federal and State air quality standards are also presented in Table 3.

Table 3 Air Quality Levels Measured at the Pasadena Monitoring Station

Pollutant	California Standard	National Standard	Year	Max. Level	Days State Standard. Exceeded[2]	Days National Standard. Exceeded[2]
Ozone	0.09 ppm	None	2010	0.101	1	n/a
1 Hour			2009	0.176	12	n/a
Average			2008	0.122	16	n/a
Ozone	0.070 ppm	0.08 ppm	2010	0.081	6	3
8 Hour			2009	0.114	19	12
Average			2008	0.100	26	16
Respirable	50 μg/m^3	150 μg/m^3	2010	42.0	--	--
Particulates			2009	72.0	24	--
PM_{10}			2008	66.0	--	--
24 Hour Average						
Fine	None	65 μg/m^3	2010	35.2	n/a	--
Particulates			2009	51.9	n/a	11
$PM_{2.5}$[5]			2008	66.0	n/a	6
24 Hour Average						
Fine	12 μg/m^3	15 μg/m^3	2010	-	--	--
Particulates			2009	12.2	Yes	3
$PM_{2.5}$			2008	12.8	Yes	2
AAM[3]						
CO	9.0 ppm	9 ppm	2010	1.94	0	0
8 Hour			2009	2.13	0	0
Average			2008	2.21	0	0
NO_2	0.25 ppm	100 ppb[6]	2010	0.071	0	n/a
1 Hour			2009	0.080	0	n/a
Average			2008	0.105	0	n/a
NO_2	None	0.053 ppm	2010	0.020	n/a	No
AAM[3]			2009	0.022	n/a	No
			2008	0.023	n/a	No

1. Percent of year where high pollutant levels were expected that measurements were made.
2. For annual averaging times a yes or no response is given if the annual average concentration exceeded the applicable standard. For the PM_{10} 24 hour standard, daily monitoring is not performed. The first number shown in Days State Standard Exceeded column is the actual number of days measured that State standard was exceeded. The second number shows the number of days the standard would be expected to be exceeded if measurements were taken every day.
3. Annual Arithmetic Mean
4. With the implementation of the federal 8-hour ozone standard, the 1-hour standard was revoked as of June 15, 2005. The previous standard is provided for informational purposes.
5. On September 21, 2006 U.S. EPA announced that it was revoking the annual average PM_{10} standard and lowering the 24-hour $PM_{2.5}$ standard to 35 μg/m^3. The previous standards are presented as the new standards are not fully implemented at this time.
6. Parts per billion (3 year average of 98th percentile of maximum daily 1-hour concentration, January 22, 2010.

-- Data Not Reported
n/a – no applicable standard
Monitoring of PM10 at the Los Angeles - North Main Street facility.
Source: CARB Air Quality Data Statistics web site www.arb.ca.gov/adam/ accessed September 12, 2011.

The monitoring data presented in Table 3 show that ozone and particulate matter (PM_{10} and $PM_{2.5}$) are the air pollutants of primary concern in the project area.

The state 1-hour ozone standard was exceeded 1 day in 2010, 12 days in 2009, and 16 days in 2008 at the Pasadena Station. The state 8-hour ozone standard was exceeded between 6 and 26 days per year for this period. The federal 8-hour standard has been exceeded between 3 and 16 days in each of the past three years. The days of ozone standard exceedance, and the peak concentrations all appear to be going down, indicating that the ozone levels are improving in the area..

The PM_{10} 24-hour state standard was exceeded 24 days in 2009. PM_{10} data were not reported in 2008 nor 2010. The federal 24-hour standard for $PM_{2.5}$ was exceeded 11 days in 2009, and 6 days in 2008. The federal annual standard has been exceeded between 2 and 3 days between 2008 and 2009. However, the number of exceedance days for $PM_{2.5}$ was not reported in 2010.

Carbon monoxide (CO) and nitrogen dioxide (NO_2) levels have not exceeded their corresponding standards for the past several years. These pollutants are currently not a problem in the area.

2.0 Potential Air Quality Impacts

Air quality impacts are usually divided into short term and long term. Short-term impacts are usually the result of construction operations. Long-term impacts are associated with the built out condition of the proposed project.

2.1 Thresholds of Significance

2.1.1 Regional Air Quality

In their "1993 CEQA Air Quality Handbook", the SCAQMD has established significance thresholds to assess the impact of project related air pollutant emissions. Table 4 presents these significance thresholds. There are separate thresholds for short-term construction and long-term operational emissions. A project with daily emission rates below these thresholds is considered to have a less than significant effect on air quality. It should be noted the thresholds recommended by the SCAQMD are very low and subject to controversy. Per the SCAQMD and CEQA, it is up to the individual lead agencies to determine if the SCAQMD thresholds are appropriate for their projects.

Table 4 SCAQMD Regional Pollutant Emission Thresholds of Significance

	Pollutant Emissions (lbs/day)					
	CO	**NOx**	**VOC**	**PM10**	**PM2.5**	**SOx**
Construction	*550*	*100*	*75*	*150*	*55*	*150*
Operation	*550*	*55*	*55*	*150*	*55*	*150*

2.1.2 Localized Significance Thresholds

As part of the SCAQMD's environmental justice program, attention was focused on localized effects of air quality. In accordance with Governing Board direction, SCAQMD staff developed localized significance threshold (LST) methodology and mass rate look-up tables by Source Receptor Area (SRA) that can be used to determine whether or not a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. The LST methodology is described in "Final Localized Significance Threshold Methodology" updated on July 2008 by the SCAQMD and is available at the SCAQMD website (http://aqmd.gov/ceqa/handbook/LST/LST.html).

The LST mass rate look-up tables provided by the SCAQMD allow one to determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts. If the calculated on-site emissions for the proposed construction or operational activities are below the LST emission levels, then the proposed construction or operation activities will not result in a significant local air quality impact.

The LST mass rate look-up tables are applicable to the following pollutants only: oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter less than 10 microns in aerodynamic diameter (PM_{10}). LSTs are derived based on the location of the activity (i.e., the source/receptor area); the emission rates of NO_x, CO, and PM_{10}; and the distance to the nearest exposed individual.

The LST methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds. If receptors are within 25 meters of the site, the methodology document states that the threshold for the 25-meter distance should be used. The LST thresholds are the same for all distances of 25 meters of less.

The proposed project is located in SRA 8. The surrounding residential areas could be located as close as 15 feet from the project site. Table 5 lists the thresholds to determine if construction of the project results in a significant local air quality impact. The thresholds for construction listed in Table 5 are based on a 1-acre project area with a receiver located less than 25 meters away. A project with daily emission rates below the thresholds during construction is considered to have a less than significant effect on local air quality. Thresholds for operation are available. However, they are not presented in this analysis because there will be virtually no change in operational emissions generated on-site.

Table 5 Localized Significance Thresholds at the Nearest Receptors

	Localized Significance Threshold (lbs/day)			
Description	**CO**	**NO_x**	**PM_{10}**	**$PM_{2.5}$**
Construction activities	535	69	4	3

2.2 Short-Term Impacts

Temporary impacts will result from project construction activities. Air pollutants will be emitted by construction equipment and fugitive dust will be generated during demolition/excavation of the existing buildings, as well as during building construction of the project.

2.2.1 Construction Emission Calculation Methodology

The construction would primarily consist of demolition and excavation of the existing pump station and concrete foundation, 24-hour concrete pour associated with the construction of the new concrete foundation, and construction of a new pump station and operation building

Typical emission rates for construction equipment were obtained from CalEEMod (California Emissions Estimator Model) which was released by the SCAQMD in 2011. CalEEMod is a computer program that can be used to estimate emissions including operation (vehicle and area) sources, as well as construction projects associated with land development projects in California.

Fugitive dust emission rates associated with construction activities for large development projects are estimated by the U.S. Environmental Protection Agency (USEPA). If water or other soil stabilizers are used to control dust as required by SCAQMD Rule 403, the emissions can be substantially reduced (i.e., by 50+ percent depending on dust control application type and frequency).

2.2.2 Construction Activities

The proposed project site is approximately 0.5 acres. The construction of the project would entail demolition and excavation of the existing pump station and concrete foundation. Based on the construction trip schedule provided by the City, the demolition and excavation phase is anticipated to take 150 days, and involves approximately 5,302 tons of debris. The preparation/grading phase is next, and would include approximately 3,218 cubic yard of export and 1,917 cubic yards of import. The following phase would consist of some 24-hour concrete pours associated with the construction of the new concrete foundation, and would take approximately 10 days. Subsequently, a new pump station and operation building will be constructed; this phase is projected to take approximately 150 days. It is projected that the construction of the project would start in early 2012 and take about 18 months to complete.

CalEEMod considers the following phases in its calculation of construction emissions: demolition/excavation, site preparation, grading, building construction including 24-hour concrete pour, paving, and architectural coating (painting). Since the site is flat, construction will consist of a minimal amount of fine grading. The appropriate number of acres, duration of each construction phase, and other key elements of the project were input into the CalEEMod to generate the estimate of emissions. At this time, the specific number of type of construction equipment are not known, and therefore, most the construction equipment involved will be based on CalEEMod default assumptions. It was assumed that the overlap between construction phases would be minimal. CalEEMod printouts are included in the Appendix.

2.2.3 Construction Emissions

Table 6 presents the results of the total emissions calculations for the construction activities discussed above. These emissions represent the highest level of emissions during each phase of construction. The projected emissions are compared to the significance thresholds described in Section 2.1.1. URBEMIS printouts are presented in the appendix.

Table 6 Peak Construction Emissions

Activity	Pollutant Emissions (lbs./day) ROG	NOX	CO	SOx	PM10	PM2.5
Demolition	2.2	14.9	9.7	0.0	1.4	1.2
Site Preparation	1.9	13.5	9.1	0.0	1.0	0.9
Grading	4.8	39.5	25.0	0.1	12.2	2.6
24-hour Concrete Pour	11.9	112.4	46.4	0.1	9.9	4.9
Paving	2.6	15.5	11.4	0.0	1.6	1.3
Building construction	9.0	60.2	44.3	0.1	29.1	4.8
Painting	12.7	3.0	2.0	0.0	0.3	0.3
	-	-	-	-	-	-
SCQAMD Thresholds	***75***	***100***	***550***	***150***	***150***	***55***
Exceed Threshold?	No	Yes	No	No	No	No

Note: Includes 61% PM reduction from watering exposed areas 3 times daily.
Underlined data indicates exceedance.

The projected construction emissions would exceed the significance thresholds established by the SCAQMD, only for NOx emisssions during the 24 hour concrete pour phase. In general, the primary source of NOx emissions would be from diesel construction equipment. Note that a particulate emission reduction of 61% from watering exposed areas is included in the analysis. The regional air quality impact from construction emissions are projected to be significant for NOx during the concrete pour phase. As a result, mitigation is recommended and is addressed in Section 3.0.

2.2.4 On-site Construction Emissions – LST Analysis

The on-site emissions were calculated utilizing CalEEMod. The emissions presented in Table 7 are those that would be emitted from activity within the project site including the emissions from construction trucks and vehicles traveling on-site (inside the project boundaries). The on-site worker trips were estimated using CalEEMod default calculations, while each on-road construction vehicle or diesel trip would have a 0.2 mile component within the project site. The total on-site construction emissions are compared to the Localized Significance Thresholds (LSTs) described in Section 2.1.2. Worksheets showing the emission calculations are presented in the appendix.

Table 7 On-site Emissions By Construction Activity

Activity	Daily Emissions (lbs./day) NOX	CO	PM10	PM2.5
Demolition	14.9	9.7	1.4	1.2
Site Preparation	13.5	8.7	0.9	0.9
Grading	14.9	9.7	1.5	1.3
24-hour Concrete Pour	107.6	42.2	4.6	4.6
Paving	15.3	9.8	1.3	1.3
Building construction	56.9	39.3	4.6	4.6
Painting	3.0	1.9	0.3	0.3
LST Thresholds	*535*	*69*	*4*	*3*
Exceed Threshold?	No	No	Yes	Yes

Note: Underlined data indicate exceedances.
Includes 61% PM reduction from watering exposed areas 3 times daily.

On-site particulate (PM_{10} and $PM_{2.5}$) emissions would be above the LSTs and would be generated during the 24-concrete pour and building construction phases. In general, the particulate emissions would primarily be from fugitive dust associated with the construction activities. Particulate emissions, to a lesser extent, would also be produced from construction equipment engines. There will be significant localized impacts due to construction, and thus, mitigation measures to reduce PM_{10} and $PM_{2.5}$ emissions are recommended to the greatest extent possible and are addressed in Section 3.0

2.2.5 Diesel Particulate Matter Emissions During Construction

In 1998, the California Air Resources Board (ARB) identified particulate matter from diesel-fueled engines (Diesel Particulate Matter or DPM) as a Toxic Air Contaminant (TAC). It is assumed that the majority of the heavy construction equipment utilized during construction would be diesel fueled and emit DPM. Impacts from toxic substances are related to cumulative exposure and are assessed over a 70-year period. Cancer risk is expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to the cancer-causing substance over a 70-year lifetime (California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Guide to Health Risk Assessment.) Grading, excavation and construction for the project, when the peak diesel exhaust emissions would occur, are expected to occur over a 18-month period with the majority of the construction expected to occur in 2012 and 2013. Because of the relatively short duration of construction compared to a 70-year lifespan, diesel emissions resulting from the construction of the project are not expected to result in a significant impact.

2.3 Long-Term Impacts

2.3.1 Project Operational Emissions

Air pollutant emissions due to operation of the project will be addressed qualitatively. The facility will consume electricity. However, the SCAQMD recommends that electric consumption not be considered in the regional emissions since most of the electric generation occurs outside the air basin. Currently, there are three Booster pumps on-site. Calendar year 2010 consumption of the existing facility was 3,963,001 KWH. The new facility will also house three booster pumps. The electrical consumption under the new project conditions is not known. However, future consumption should be less due to the installation of new energy efficient equipment. There are no other significant sources of air emissions associated with the facility. Changes to operational emissions are expected to be insignificant.

3.0 Mitigation Measures

NOx emissions were projected to be above the regional threshold of 100 pounds per day. The construction emissions include a 61% reduction from watering the site three times per day to control fugitive dust. However, even with watering, PM_{10} and $PM_{2.5}$ emissions would still be above the LST thresholds during the 24-hour concrete pour and building construction phases.

3.1 Required Mitigation Measures

Mitigation measures are provided below that bring all emissions to below the thresholds.

AQ-1: Require that the site be watered three times a day during the demolition/excavation, grading and site preparation phases. Watering the construction site three times per day results in a 61% reduction in particulate emissions due to soil disturbance.

AQ-2: Require all off-road diesel construction equipment during the concrete pour and building construction phases to meet "Tier IV" emission requirements. With this mitigation measure in place the NOx emissions during grading will be reduced to below the 100 pounds per day significance threshold. This mitigation is also necessary to reduce the particulate emissions.

3.2 Emissions with Mitigation Measures

Table 8 presents the results of the emissions calculations for the construction activities with the mitigation measures in place. The highest daily construction emissions are presented below and represent a worst-case scenario.

Table 8 Peak Construction Emissions With Mitigation

	Pollutant Emissions (lbs./day)					
Activity	**ROG**	**NOX**	**CO**	**SOx**	**PM10**	**PM2.5**
Demolition/excavation[1]	1.8	11.6	10.6	0.0	3.2	0.9
Site Preparation[1]	1.6	11.0	9.0	0.0	0.8	0.7
Grading[1]	4.3	35.8	24.9	0.1	11.9	2.2
24-hour Concrete Pour[2]	4.3	12.7	68.1	0.1	5.6	0.6
Paving	2.3	13.0	11.0	0.0	1.4	1.1
Building construction[2]	4.3	21.7	44.0	0.1	26.0	1.7
Architectural Coating	12.7	3.0	2.0	0.0	0.3	0.3
	-	-	-	-	-	-
SCQAMD Thresholds	***75***	***100***	***550***	***150***	***150***	***55***
Exceed Threshold?	No	No	No	No	No	No

1.Includes 61% PM reduction from watering exposed area 3x daily.
2.Tier 4 equipment used for 24-hour concrete pour & building construction.

The projected construction emissions are below the regional significance thresholds established by the SCAQMD for all pollutants with the mitigation measures incorporated.

The on-site emissions with mitigation were calculated utilizing CalEEMod. The emissions presented in Table 9 are those that would be emitted from activity within the project site.

Table 9 On-Site Emissions By Construction Activity With Mitigation

	Daily Emissions (lbs./day)			
Activity	**NOX**	**CO**	**PM10**	**PM2.5**
Demolition/excavation[1]	11.2	9.5	1.1	0.8
Site Preparation[1]	11.0	8.6	0.7	0.7
Grading[1]	11.2	9.5	1.2	1.0
24-hour Concrete Pour[2]	7.8	64.0	0.4	0.4
Paving	12.8	9.5	1.1	1.1
Building construction[2]	18.3	39.0	1.5	1.5
Architectural Coating	3.0	1.9	0.3	0.3
LST Thresholds	*535*	*69*	*4*	*3*
Exceed Threshold?	No	No	No	No

1.Includes 61% PM reduction from watering exposed area 3x daily.
2.Tier 4 equipment used for 24-hour concrete pour & building construction.

With mitigation, none of the emissions will exceed the LST thresholds and no local impacts will occur.

4.0 Unavoidable Significant Impacts

No unavoidable significant impacts will occur with the proposed project.

Appendix

CalEEMod Output Files

Wilson Reservoir Pump Station

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	1.38	1000sqft
Other Asphalt Surfaces	10.18	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Company**	Southern California Edison
Climate Zone	8		2.2		
		Precipitation Freq (Days)			
			33		

1.3 User Entered Comments

Project Characteristics -

Land Use - Estimated 1,375 sq.ft pump station and operation building.

Construction Phase - Construction is projected to start in 2012.
Based on construction trip generation schedule.
Demolition duration is 150 days.
Building construction duration is 150 days.

Off-road Equipment - Assumed 2 cement and mortar mixers , 2 construction equipment, 1 pump and 1 paving equipment for 24-hour concrete pour.
Trips and VMT - Based on Construction Trip Generation table from City of S. Pasadena.
Demolition - 82 haul round trips/day
24-hour concrete pour - 60 haul round trips/day
Building construction - 122 haul round trips/day

Demolition - Demolition involves 5,302 tons of debris.

Grading - Grading includes 1,917 cy of import, and 3,218 cy of export.

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	11.89	112.44	46.35	0.14	24.37	4.82	29.12	0.54	4.82	4.85	0.00	15,628.48	0.00	1.04	0.00	15,650.32
2013	12.65	55.83	43.46	0.07	24.37	4.22	28.58	0.03	4.22	4.25	0.00	6,981.72	0.00	0.73	0.00	6,997.07
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	11.89	112.44	46.35	0.14	24.37	4.82	29.12	0.28	4.82	4.85	0.00	15,628.48	0.00	1.04	0.00	15,650.32
2013	12.65	55.83	43.46	0.07	24.37	4.22	28.58	0.03	4.22	4.25	0.00	6,981.72	0.00	0.73	0.00	6,997.07
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.30	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
Mobile	0.06	0.14	0.58	0.00	0.11	0.01	0.11	0.00	0.01	0.01		102.92		0.00		103.02
Total	**0.36**	**0.15**	**0.59**	**0.00**	**0.11**	**0.01**	**0.11**	**0.00**	**0.01**	**0.01**		**112.71**		**0.00**	**0.00**	**112.87**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.30	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
Mobile	0.06	0.14	0.58	0.00	0.11	0.01	0.11	0.00	0.01	0.01		102.92		0.00		103.02

Total	**0.36**	**0.15**	**0.59**	**0.00**	**0.11**	**0.01**	**0.11**	**0.00**	**0.01**	**0.01**		**112.71**		**0.00**	**0.00**	**112.87**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.76	0.00	0.76	0.00	0.00	0.00						0.00
Off-Road	2.17	14.85	9.68	0.02		1.15	1.15		1.15	1.15		1,476.12		0.19		1,480.19
Total	**2.17**	**14.85**	**9.68**	**0.02**	**0.76**	**1.15**	**1.91**	**0.00**	**1.15**	**1.15**		**1,476.12**		**0.19**		**1,480.19**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.04	0.33	0.20	0.00	1.91	0.02	1.92	0.00	0.02	0.02		45.84		0.00		45.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.85	0.00	0.15	0.01	0.16	0.01	0.01	0.01		131.00		0.01		131.17
Total	**0.11**	**0.40**	**1.05**	**0.00**	**2.06**	**0.03**	**2.08**	**0.01**	**0.03**	**0.03**		**176.84**		**0.01**		**177.04**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.29	0.00	0.29	0.00	0.00	0.00						0.00
Off-Road	2.17	14.85	9.68	0.02		1.15	1.15		1.15	1.15	0.00	1,476.12		0.19		1,480.19
Total	**2.17**	**14.85**	**9.68**	**0.02**	**0.29**	**1.15**	**1.44**	**0.00**	**1.15**	**1.15**	**0.00**	**1,476.12**		**0.19**		**1,480.19**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.04	0.33	0.20	0.00	1.91	0.02	1.92	0.00	0.02	0.02		45.84		0.00		45.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.85	0.00	0.15	0.01	0.16	0.01	0.01	0.01		131.00		0.01		131.17
Total	**0.11**	**0.40**	**1.05**	**0.00**	**2.06**	**0.03**	**2.08**	**0.01**	**0.03**	**0.03**		**176.84**		**0.01**		**177.04**

3.3 Site Preparation - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.02	0.00	0.02	0.00	0.00	0.00						0.00
Off-Road	1.85	13.45	8.72	0.01		0.89	0.89		0.89	0.89		1,402.65		0.17		1,406.13
Total	**1.85**	**13.45**	**8.72**	**0.01**	**0.02**	**0.89**	**0.91**	**0.00**	**0.89**	**0.89**		**1,402.65**		**0.17**		**1,406.13**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.04	0.04	0.42	0.00	0.08	0.00	0.08	0.00	0.00	0.01		65.50		0.00		65.59
Total	**0.04**	**0.04**	**0.42**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.01**		**65.50**		**0.00**		**65.59**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00						0.00
Off-Road	1.85	13.45	8.72	0.01		0.89	0.89		0.89	0.89	0.00	1,402.65		0.17		1,406.13
Total	**1.85**	**13.45**	**8.72**	**0.01**	**0.01**	**0.89**	**0.90**	**0.00**	**0.89**	**0.89**	**0.00**	**1,402.65**		**0.17**		**1,406.13**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.04	0.04	0.42	0.00	0.08	0.00	0.08	0.00	0.00	0.01		65.50		0.00		65.59
Total	**0.04**	**0.04**	**0.42**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.01**		**65.50**		**0.00**		**65.59**

3.4 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.86	0.00	0.86	0.42	0.00	0.42						0.00
Off-Road	2.17	14.85	9.68	0.02		1.15	1.15		1.15	1.15		1,476.12		0.19		1,480.19
Total	**2.17**	**14.85**	**9.68**	**0.02**	**0.86**	**1.15**	**2.01**	**0.42**	**1.15**	**1.57**		**1,476.12**		**0.19**		**1,480.19**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.58	24.55	14.48	0.03	9.47	1.11	10.58	0.11	1.11	1.23		3,370.71		0.13		3,373.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.85	0.00	0.15	0.01	0.16	0.01	0.01	0.01		131.00		0.01		131.17
Total	**2.65**	**24.62**	**15.33**	**0.03**	**9.62**	**1.12**	**10.74**	**0.12**	**1.12**	**1.24**		**3,501.71**		**0.14**		**3,504.51**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.34	0.00	0.34	0.16	0.00	0.16						0.00
Off-Road	2.17	14.85	9.68	0.02		1.15	1.15		1.15	1.15	0.00	1,476.12		0.19		1,480.19
Total	**2.17**	**14.85**	**9.68**	**0.02**	**0.34**	**1.15**	**1.49**	**0.16**	**1.15**	**1.31**	**0.00**	**1,476.12**		**0.19**		**1,480.19**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.58	24.55	14.48	0.03	9.47	1.11	10.58	0.11	1.11	1.23		3,370.71		0.13		3,373.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.85	0.00	0.15	0.01	0.16	0.01	0.01	0.01		131.00		0.01		131.17
Total	**2.65**	**24.62**	**15.33**	**0.03**	**9.62**	**1.12**	**10.74**	**0.12**	**1.12**	**1.24**		**3,501.71**		**0.14**		**3,504.51**

3.5 24-hour concrete pour - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	11.29	107.55	42.18	0.13		4.60	4.60		4.60	4.60		14,763.37		1.00		14,784.45
Total	**11.29**	**107.55**	**42.18**	**0.13**		**4.60**	**4.60**		**4.60**	**4.60**		**14,763.37**		**1.00**		**14,784.45**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.39	3.66	2.16	0.00	4.20	0.17	4.37	0.02	0.17	0.18		503.09		0.02		503.48

Vendor	0.11	1.11	0.74	0.00	0.16	0.04	0.20	0.00	0.04	0.05		165.52		0.01		165.64
Worker	0.11	0.11	1.27	0.00	0.67	0.01	0.68	0.01	0.01	0.02		196.50		0.01		196.76
Total	**0.61**	**4.88**	**4.17**	**0.00**	**5.03**	**0.22**	**5.25**	**0.03**	**0.22**	**0.25**		**865.11**		**0.04**		**865.88**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	11.29	107.55	42.18	0.13		4.60	4.60		4.60	4.60	0.00	14,763.37		1.00		14,784.45
Total	**11.29**	**107.55**	**42.18**	**0.13**		**4.60**	**4.60**		**4.60**	**4.60**	**0.00**	**14,763.37**		**1.00**		**14,784.45**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.39	3.66	2.16	0.00	4.20	0.17	4.37	0.02	0.17	0.18		503.09		0.02		503.48
Vendor	0.11	1.11	0.74	0.00	0.16	0.04	0.20	0.00	0.04	0.05		165.52		0.01		165.64
Worker	0.11	0.11	1.27	0.00	0.67	0.01	0.68	0.01	0.01	0.02		196.50		0.01		196.76
Total	**0.61**	**4.88**	**4.17**	**0.00**	**5.03**	**0.22**	**5.25**	**0.03**	**0.22**	**0.25**		**865.11**		**0.04**		**865.88**

3.6 Paving - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.47	15.33	9.84	0.02		1.30	1.30		1.30	1.30		1,408.52		0.22		1,413.17
Paving	0.04					0.00	0.00		0.00	0.00						0.00
Total	**2.51**	**15.33**	**9.84**	**0.02**		**1.30**	**1.30**		**1.30**	**1.30**		**1,408.52**		**0.22**		**1,413.17**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.13	0.13	1.53	0.00	0.28	0.01	0.29	0.01	0.01	0.02		235.80		0.01		236.11
Total	**0.13**	**0.13**	**1.53**	**0.00**	**0.28**	**0.01**	**0.29**	**0.01**	**0.01**	**0.02**		**235.80**		**0.01**		**236.11**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.47	15.33	9.84	0.02		1.30	1.30		1.30	1.30	0.00	1,408.52		0.22		1,413.17
Paving	0.04					0.00	0.00		0.00	0.00						0.00
Total	**2.51**	**15.33**	**9.84**	**0.02**		**1.30**	**1.30**		**1.30**	**1.30**	**0.00**	**1,408.52**		**0.22**		**1,413.17**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.13	0.13	1.53	0.00	0.28	0.01	0.29	0.01	0.01	0.02		235.80		0.01		236.11
Total	**0.13**	**0.13**	**1.53**	**0.00**	**0.28**	**0.01**	**0.29**	**0.01**	**0.01**	**0.02**		**235.80**		**0.01**		**236.11**

3.7 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.46	56.87	39.28	0.06		4.62	4.62		4.62	4.62		6,076.13		0.76		6,092.09
Total	**8.46**	**56.87**	**39.28**	**0.06**		**4.62**	**4.62**		**4.62**	**4.62**		**6,076.13**		**0.76**		**6,092.09**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.50	0.29	0.00	19.87	0.02	19.90	0.00	0.02	0.02		68.20		0.00		68.25
Vendor	0.25	2.60	1.73	0.00	0.85	0.10	0.95	0.01	0.10	0.11		386.22		0.01		386.48
Worker	0.26	0.25	2.97	0.00	3.64	0.02	3.66	0.02	0.02	0.04		458.49		0.03		459.10
Total	**0.56**	**3.35**	**4.99**	**0.00**	**24.36**	**0.14**	**24.51**	**0.03**	**0.14**	**0.17**		**912.91**		**0.04**		**913.83**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.46	56.87	39.28	0.06		4.62	4.62		4.62	4.62	0.00	6,076.13		0.76		6,092.09
Total	**8.46**	**56.87**	**39.28**	**0.06**		**4.62**	**4.62**		**4.62**	**4.62**	**0.00**	**6,076.13**		**0.76**		**6,092.09**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.50	0.29	0.00	19.87	0.02	19.90	0.00	0.02	0.02		68.20		0.00		68.25
Vendor	0.25	2.60	1.73	0.00	0.85	0.10	0.95	0.01	0.10	0.11		386.22		0.01		386.48
Worker	0.26	0.25	2.97	0.00	3.64	0.02	3.66	0.02	0.02	0.04		458.49		0.03		459.10
Total	**0.56**	**3.35**	**4.99**	**0.00**	**24.36**	**0.14**	**24.51**	**0.03**	**0.14**	**0.17**		**912.91**		**0.04**		**913.83**

3.7 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.74	52.78	38.94	0.06		4.09	4.09		4.09	4.09		6,076.12		0.69		6,090.62
Total	**7.74**	**52.78**	**38.94**	**0.06**		**4.09**	**4.09**		**4.09**	**4.09**		**6,076.12**		**0.69**		**6,090.62**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.45	0.26	0.00	19.87	0.02	19.89	0.00	0.02	0.02		68.45		0.00		68.50
Vendor	0.23	2.37	1.54	0.00	0.85	0.09	0.94	0.01	0.09	0.10		387.45		0.01		387.69
Worker	0.24	0.23	2.72	0.00	3.64	0.02	3.66	0.02	0.02	0.04		449.70		0.03		450.26
Total	**0.52**	**3.05**	**4.52**	**0.00**	**24.36**	**0.13**	**24.49**	**0.03**	**0.13**	**0.16**		**905.60**		**0.04**		**906.45**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.74	52.78	38.94	0.06		4.09	4.09		4.09	4.09	0.00	6,076.12		0.69		6,090.62
Total	**7.74**	**52.78**	**38.94**	**0.06**		**4.09**	**4.09**		**4.09**	**4.09**	**0.00**	**6,076.12**		**0.69**		**6,090.62**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.45	0.26	0.00	19.87	0.02	19.89	0.00	0.02	0.02		68.45		0.00		68.50
Vendor	0.23	2.37	1.54	0.00	0.85	0.09	0.94	0.01	0.09	0.10		387.45		0.01		387.69
Worker	0.24	0.23	2.72	0.00	3.64	0.02	3.66	0.02	0.02	0.04		449.70		0.03		450.26
Total	**0.52**	**3.05**	**4.52**	**0.00**	**24.36**	**0.13**	**24.49**	**0.03**	**0.13**	**0.16**		**905.60**		**0.04**		**906.45**

3.8 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	12.16					0.00	0.00		0.00	0.00						0.00
Off-Road	0.49	2.96	1.94	0.00		0.27	0.27		0.27	0.27		281.19		0.04		282.10
Total	**12.65**	**2.96**	**1.94**	**0.00**		**0.27**	**0.27**		**0.27**	**0.27**		**281.19**		**0.04**		**282.10**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.01	0.01	0.08	0.00	0.02	0.00	0.02	0.00	0.00	0.00		12.85		0.00		12.86
Total	**0.01**	**0.01**	**0.08**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**		**12.85**		**0.00**		**12.86**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.16					0.00	0.00		0.00	0.00						0.00
Off-Road	0.49	2.96	1.94	0.00		0.27	0.27		0.27	0.27	0.00	281.19		0.04		282.10
Total	**12.65**	**2.96**	**1.94**	**0.00**		**0.27**	**0.27**		**0.27**	**0.27**	**0.00**	**281.19**		**0.04**		**282.10**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.01	0.01	0.08	0.00	0.02	0.00	0.02	0.00	0.00	0.00		12.85		0.00		12.86
Total	**0.01**	**0.01**	**0.08**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**		**12.85**		**0.00**		**12.86**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.06	0.14	0.58	0.00	0.11	0.01	0.11	0.00	0.01	0.01		102.92		0.00		103.02
Unmitigated	0.06	0.14	0.58	0.00	0.11	0.01	0.11	0.00	0.01	0.01		102.92		0.00		103.02
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	9.62	1.82	0.94	24,511	24,511
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	9.62	1.82	0.94	24,511	24,511

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Light Industry	8.90	13.30	7.40	59.00	28.00	13.00
Other Asphalt Surfaces	8.90	13.30	7.40	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
NaturalGas Unmitigated	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day											lb/day				
General Light Industry	83.2534	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**9.79**		**0.00**	**0.00**	**9.85**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day											lb/day				
General Light Industry	0.0832534	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**9.79**		**0.00**	**0.00**	**9.85**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.30	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.30	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.07					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.23					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.30**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.07					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.23					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.30**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Wilson Reservoir Pump Station

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	1.38	1000sqft
Other Asphalt Surfaces	10.18	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Company**	Southern California Edison
Climate Zone	8		2.2		
		Precipitation Freq (Days)			
			33		

1.3 User Entered Comments

Project Characteristics -

Land Use - Estimated 1,375 sq.ft pump station and operation building.

Construction Phase - Construction is projected to start in 2012.
Based on construction trip generation schedule.
Demolition duration is 150 days.
Building construction duration is 150 days.

Off-road Equipment - Assumed 2 cement and mortar mixers , 2 construction equipment, 1 pump and 1 paving equipment for 24-hour concrete pour.

Trips and VMT - Based on Construction Trip Generation table from City of S. Pasadena.
Demolition - 82 haul round trips/day
24-hour concrete pour - 60 haul round trips/day
Building construction - 122 haul round trips/day

Demolition - Demolition involves 5,302 tons of debris.

Grading - Grading includes 1,917 cy of import, and 3,218 cy of export.

Construction Off-road Equipment Mitigation - Tier IV equipment for 24-hour concrete pour and buidling constr phases.

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	11.89	112.44	46.35	0.14	24.37	4.82	29.12	0.54	4.82	4.85	0.00	15,628.48	0.00	1.04	0.00	15,650.32
2013	12.65	55.83	43.46	0.07	24.37	4.22	28.58	0.03	4.22	4.25	0.00	6,981.72	0.00	0.73	0.00	6,997.07
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	4.34	35.80	68.14	0.14	24.37	1.93	26.02	0.28	1.93	2.22	0.00	15,628.48	0.00	1.04	0.00	15,650.32
2013	12.65	20.24	43.42	0.07	24.37	1.49	25.85	0.03	1.49	1.52	0.00	6,981.72	0.00	0.73	0.00	6,997.07
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.30	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
Mobile	0.06	0.14	0.58	0.00	0.11	0.01	0.11	0.00	0.01	0.01		102.92		0.00		103.02
Total	**0.36**	**0.15**	**0.59**	**0.00**	**0.11**	**0.01**	**0.11**	**0.00**	**0.01**	**0.01**		**112.71**		**0.00**	**0.00**	**112.87**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.30	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85

Mobile	0.06	0.14	0.58	0.00	0.11	0.01	0.11	0.00	0.01	0.01		102.92		0.00		103.02
Total	**0.36**	**0.15**	**0.59**	**0.00**	**0.11**	**0.01**	**0.11**	**0.00**	**0.01**	**0.01**		**112.71**		**0.00**	**0.00**	**112.87**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.76	0.00	0.76	0.00	0.00	0.00						0.00
Off-Road	2.17	14.85	9.68	0.02		1.15	1.15		1.15	1.15		1,476.12		0.19		1,480.19
Total	**2.17**	**14.85**	**9.68**	**0.02**	**0.76**	**1.15**	**1.91**	**0.00**	**1.15**	**1.15**		**1,476.12**		**0.19**		**1,480.19**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.04	0.33	0.20	0.00	1.91	0.02	1.92	0.00	0.02	0.02		45.84		0.00		45.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.85	0.00	0.15	0.01	0.16	0.01	0.01	0.01		131.00		0.01		131.17
Total	**0.11**	**0.40**	**1.05**	**0.00**	**2.06**	**0.03**	**2.08**	**0.01**	**0.03**	**0.03**		**176.84**		**0.01**		**177.04**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.29	0.00	0.29	0.00	0.00	0.00						0.00
Off-Road	1.69	11.18	9.53	0.02		0.82	0.82		0.82	0.82	0.00	1,476.12		0.19		1,480.19
Total	**1.69**	**11.18**	**9.53**	**0.02**	**0.29**	**0.82**	**1.11**	**0.00**	**0.82**	**0.82**	**0.00**	**1,476.12**		**0.19**		**1,480.19**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.04	0.33	0.20	0.00	1.91	0.02	1.92	0.00	0.02	0.02		45.84		0.00		45.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.85	0.00	0.15	0.01	0.16	0.01	0.01	0.01		131.00		0.01		131.17
Total	**0.11**	**0.40**	**1.05**	**0.00**	**2.06**	**0.03**	**2.08**	**0.01**	**0.03**	**0.03**		**176.84**		**0.01**		**177.04**

3.3 Site Preparation - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.02	0.00	0.02	0.00	0.00	0.00						0.00
Off-Road	1.85	13.45	8.72	0.01		0.89	0.89		0.89	0.89		1,402.65		0.17		1,406.13
Total	**1.85**	**13.45**	**8.72**	**0.01**	**0.02**	**0.89**	**0.91**	**0.00**	**0.89**	**0.89**		**1,402.65**		**0.17**		**1,406.13**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.04	0.04	0.42	0.00	0.08	0.00	0.08	0.00	0.00	0.01		65.50		0.00		65.59
Total	**0.04**	**0.04**	**0.42**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.01**		**65.50**		**0.00**		**65.59**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00						0.00
Off-Road	1.53	11.00	8.62	0.01		0.67	0.67		0.67	0.67	0.00	1,402.65		0.17		1,406.13
Total	**1.53**	**11.00**	**8.62**	**0.01**	**0.01**	**0.67**	**0.68**	**0.00**	**0.67**	**0.67**	**0.00**	**1,402.65**		**0.17**		**1,406.13**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.04	0.04	0.42	0.00	0.08	0.00	0.08	0.00	0.00	0.01		65.50		0.00		65.59
Total	**0.04**	**0.04**	**0.42**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.01**		**65.50**		**0.00**		**65.59**

3.4 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.86	0.00	0.86	0.42	0.00	0.42						0.00
Off-Road	2.17	14.85	9.68	0.02		1.15	1.15		1.15	1.15		1,476.12		0.19		1,480.19
Total	**2.17**	**14.85**	**9.68**	**0.02**	**0.86**	**1.15**	**2.01**	**0.42**	**1.15**	**1.57**		**1,476.12**		**0.19**		**1,480.19**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.58	24.55	14.48	0.03	9.47	1.11	10.58	0.11	1.11	1.23		3,370.71		0.13		3,373.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.85	0.00	0.15	0.01	0.16	0.01	0.01	0.01		131.00		0.01		131.17
Total	**2.65**	**24.62**	**15.33**	**0.03**	**9.62**	**1.12**	**10.74**	**0.12**	**1.12**	**1.24**		**3,501.71**		**0.14**		**3,504.51**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.34	0.00	0.34	0.16	0.00	0.16						0.00
Off-Road	1.69	11.18	9.53	0.02		0.82	0.82		0.82	0.82	0.00	1,476.12		0.19		1,480.19
Total	**1.69**	**11.18**	**9.53**	**0.02**	**0.34**	**0.82**	**1.16**	**0.16**	**0.82**	**0.98**	**0.00**	**1,476.12**		**0.19**		**1,480.19**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.58	24.55	14.48	0.03	9.47	1.11	10.58	0.11	1.11	1.23		3,370.71		0.13		3,373.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.85	0.00	0.15	0.01	0.16	0.01	0.01	0.01		131.00		0.01		131.17
Total	**2.65**	**24.62**	**15.33**	**0.03**	**9.62**	**1.12**	**10.74**	**0.12**	**1.12**	**1.24**		**3,501.71**		**0.14**		**3,504.51**

3.5 24-hour concrete pour - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	11.29	107.55	42.18	0.13		4.60	4.60		4.60	4.60		14,763.37		1.00		14,784.45
Total	**11.29**	**107.55**	**42.18**	**0.13**		**4.60**	**4.60**		**4.60**	**4.60**		**14,763.37**		**1.00**		**14,784.45**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.39	3.66	2.16	0.00	4.20	0.17	4.37	0.02	0.17	0.18		503.09		0.02		503.48
Vendor	0.11	1.11	0.74	0.00	0.16	0.04	0.20	0.00	0.04	0.05		165.52		0.01		165.64
Worker	0.11	0.11	1.27	0.00	0.67	0.01	0.68	0.01	0.01	0.02		196.50		0.01		196.76
Total	**0.61**	**4.88**	**4.17**	**0.00**	**5.03**	**0.22**	**5.25**	**0.03**	**0.22**	**0.25**		**865.11**		**0.04**		**865.88**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.70	7.79	63.97	0.13		0.39	0.39		0.39	0.39	0.00	14,763.37		1.00		14,784.45
Total	**3.70**	**7.79**	**63.97**	**0.13**		**0.39**	**0.39**		**0.39**	**0.39**	**0.00**	**14,763.37**		**1.00**		**14,784.45**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.39	3.66	2.16	0.00	4.20	0.17	4.37	0.02	0.17	0.18		503.09		0.02		503.48
Vendor	0.11	1.11	0.74	0.00	0.16	0.04	0.20	0.00	0.04	0.05		165.52		0.01		165.64
Worker	0.11	0.11	1.27	0.00	0.67	0.01	0.68	0.01	0.01	0.02		196.50		0.01		196.76
Total	**0.61**	**4.88**	**4.17**	**0.00**	**5.03**	**0.22**	**5.25**	**0.03**	**0.22**	**0.25**		**865.11**		**0.04**		**865.88**

3.6 Paving - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.47	15.33	9.84	0.02		1.30	1.30		1.30	1.30		1,408.52		0.22		1,413.17
Paving	0.04					0.00	0.00		0.00	0.00						0.00
Total	**2.51**	**15.33**	**9.84**	**0.02**		**1.30**	**1.30**		**1.30**	**1.30**		**1,408.52**		**0.22**		**1,413.17**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.13	0.13	1.53	0.00	0.28	0.01	0.29	0.01	0.01	0.02		235.80		0.01		236.11
Total	**0.13**	**0.13**	**1.53**	**0.00**	**0.28**	**0.01**	**0.29**	**0.01**	**0.01**	**0.02**		**235.80**		**0.01**		**236.11**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.13	12.82	9.45	0.02		1.09	1.09		1.09	1.09	0.00	1,408.52		0.22		1,413.17
Paving	0.04					0.00	0.00		0.00	0.00						0.00
Total	**2.17**	**12.82**	**9.45**	**0.02**		**1.09**	**1.09**		**1.09**	**1.09**	**0.00**	**1,408.52**		**0.22**		**1,413.17**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.13	0.13	1.53	0.00	0.28	0.01	0.29	0.01	0.01	0.02		235.80		0.01		236.11
Total	**0.13**	**0.13**	**1.53**	**0.00**	**0.28**	**0.01**	**0.29**	**0.01**	**0.01**	**0.02**		**235.80**		**0.01**		**236.11**

3.7 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.46	56.87	39.28	0.06		4.62	4.62		4.62	4.62		6,076.13		0.76		6,092.09
Total	**8.46**	**56.87**	**39.28**	**0.06**		**4.62**	**4.62**		**4.62**	**4.62**		**6,076.13**		**0.76**		**6,092.09**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.50	0.29	0.00	19.87	0.02	19.90	0.00	0.02	0.02		68.20		0.00		68.25
Vendor	0.25	2.60	1.73	0.00	0.85	0.10	0.95	0.01	0.10	0.11		386.22		0.01		386.48
Worker	0.26	0.25	2.97	0.00	3.64	0.02	3.66	0.02	0.02	0.04		458.49		0.03		459.10
Total	**0.56**	**3.35**	**4.99**	**0.00**	**24.36**	**0.14**	**24.51**	**0.03**	**0.14**	**0.17**		**912.91**		**0.04**		**913.83**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.73	18.31	38.99	0.06		1.52	1.52		1.52	1.52	0.00	6,076.13		0.76		6,092.09
Total	**3.73**	**18.31**	**38.99**	**0.06**		**1.52**	**1.52**		**1.52**	**1.52**	**0.00**	**6,076.13**		**0.76**		**6,092.09**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.50	0.29	0.00	19.87	0.02	19.90	0.00	0.02	0.02		68.20		0.00		68.25
Vendor	0.25	2.60	1.73	0.00	0.85	0.10	0.95	0.01	0.10	0.11		386.22		0.01		386.48
Worker	0.26	0.25	2.97	0.00	3.64	0.02	3.66	0.02	0.02	0.04		458.49		0.03		459.10
Total	**0.56**	**3.35**	**4.99**	**0.00**	**24.36**	**0.14**	**24.51**	**0.03**	**0.14**	**0.17**		**912.91**		**0.04**		**913.83**

3.7 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.74	52.78	38.94	0.06		4.09	4.09		4.09	4.09		6,076.12		0.69		6,090.62
Total	**7.74**	**52.78**	**38.94**	**0.06**		**4.09**	**4.09**		**4.09**	**4.09**		**6,076.12**		**0.69**		**6,090.62**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.45	0.26	0.00	19.87	0.02	19.89	0.00	0.02	0.02		68.45		0.00		68.50
Vendor	0.23	2.37	1.54	0.00	0.85	0.09	0.94	0.01	0.09	0.10		387.45		0.01		387.69
Worker	0.24	0.23	2.72	0.00	3.64	0.02	3.66	0.02	0.02	0.04		449.70		0.03		450.26
Total	**0.52**	**3.05**	**4.52**	**0.00**	**24.36**	**0.13**	**24.49**	**0.03**	**0.13**	**0.16**		**905.60**		**0.04**		**906.45**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.51	17.19	38.90	0.06		1.36	1.36		1.36	1.36	0.00	6,076.12		0.69		6,090.62
Total	**3.51**	**17.19**	**38.90**	**0.06**		**1.36**	**1.36**		**1.36**	**1.36**	**0.00**	**6,076.12**		**0.69**		**6,090.62**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.05	0.45	0.26	0.00	19.87	0.02	19.89	0.00	0.02	0.02		68.45		0.00		68.50
Vendor	0.23	2.37	1.54	0.00	0.85	0.09	0.94	0.01	0.09	0.10		387.45		0.01		387.69
Worker	0.24	0.23	2.72	0.00	3.64	0.02	3.66	0.02	0.02	0.04		449.70		0.03		450.26
Total	**0.52**	**3.05**	**4.52**	**0.00**	**24.36**	**0.13**	**24.49**	**0.03**	**0.13**	**0.16**		**905.60**		**0.04**		**906.45**

3.8 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.16					0.00	0.00		0.00	0.00						0.00
Off-Road	0.49	2.96	1.94	0.00		0.27	0.27		0.27	0.27		281.19		0.04		282.10
Total	**12.65**	**2.96**	**1.94**	**0.00**		**0.27**	**0.27**		**0.27**	**0.27**		**281.19**		**0.04**		**282.10**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.01	0.01	0.08	0.00	0.02	0.00	0.02	0.00	0.00	0.00		12.85		0.00		12.86
Total	**0.01**	**0.01**	**0.08**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**		**12.85**		**0.00**		**12.86**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.16					0.00	0.00		0.00	0.00						0.00
Off-Road	0.49	2.96	1.94	0.00		0.27	0.27		0.27	0.27	0.00	281.19		0.04		282.10
Total	**12.65**	**2.96**	**1.94**	**0.00**		**0.27**	**0.27**		**0.27**	**0.27**	**0.00**	**281.19**		**0.04**		**282.10**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.01	0.01	0.08	0.00	0.02	0.00	0.02	0.00	0.00	0.00		12.85		0.00		12.86
Total	**0.01**	**0.01**	**0.08**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**		**12.85**		**0.00**		**12.86**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.06	0.14	0.58	0.00	0.11	0.01	0.11	0.00	0.01	0.01		102.92		0.00		103.02
Unmitigated	0.06	0.14	0.58	0.00	0.11	0.01	0.11	0.00	0.01	0.01		102.92		0.00		103.02
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	9.62	1.82	0.94	24,511	24,511
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	9.62	1.82	0.94	24,511	24,511

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Light Industry	8.90	13.30	7.40	59.00	28.00	13.00
Other Asphalt Surfaces	8.90	13.30	7.40	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
NaturalGas Unmitigated	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Light Industry	83.2534	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**9.79**		**0.00**	**0.00**	**9.85**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Light Industry	0.0832534	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		9.79		0.00	0.00	9.85
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**9.79**		**0.00**	**0.00**	**9.85**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.30	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.30	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.07					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.23					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.30**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.07					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.23					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.30**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water